What is claimed is:

1. A tone data processing device for receiving, from a storage device storing waveform sample data sampled at a given sampling rate, the waveform sample data asynchronously with the given sampling rate and generating tone data on the basis of the waveform sample data received from said storage device, said tone data processing device comprising:

an input buffer for storing the waveform sample data received from said storage device;

an output buffer; and

a processor connected with said input buffer and said output buffer and adapted to execute:

a first process for reading out the waveform sample data stored in said input buffer and converting the sampling rate of the read-out waveform sample data to an inner sampling rate selected from among a plurality of predetermined inner sampling rates;

a second process for performing predetermined arithmetic processing on the waveform sample data converted to the selected inner sampling rate;

a third process for converting the waveform sample data having undergone the predetermined arithmetic processing to a predetermined output sampling rate; and

a fourth process for writing, into said output buffer, the waveform sample data converted to the predetermined output sampling rate.

2. A tone data processing device as recited in claim 1 wherein said processor is adapted to further perform a process for sequentially reading out the waveform sample data from said output buffer at an output sampling frequency corresponding to said predetermined output sampling rate to thereby generate tone data in accordance with the output sampling frequency.

3. A tone data processing device as recited in claim 1 which collectively receives, from said storage device, a given number of the waveform sample data asynchronously with said given sampling rate and temporarily stores the given number of the waveform sample data, collectively received from said storage device, into said input buffer.

4. A tone data processing device as recited in claim 1 wherein said first process performed by said processor compares the sampling rate of the waveform sample data stored in said input buffer and the plurality of predetermined inner sampling rates to thereby select one of the predetermined inner sampling rates which is higher than and closest to the sampling rate of the waveform sample data, and converts the sampling rate of the waveform sample data to the selected inner sampling rate.

5. A tone data processing device as recited in claim 1 which is adapted to generate tone data for a plurality of

channels, and

wherein said input buffer sequentially stores a given number of the waveform sample data for each the channel collectively received by said tone data processing device,

wherein said processor performs, at least separately for each of the channels, a process for reading out the waveform sample data for each of the channels stored in said input buffer and converting the read-out waveform sample data to the inner sampling rate, said second process for performing predetermined arithmetic processing on the waveform sample data and said third process for converting the waveform sample data to the predetermined output sampling rate, and

wherein said fourth process for writing accumulates the waveform sample data of a given channel to the waveform sample data of another channel already written in said output buffer and thereby renews stored contents of said output buffer with resultant accumulated values of the waveform sample data in such a manner that waveform data obtained by adding together the waveform sample data converted to said predetermined output sampling rate are ultimately stored into said output buffer.

6. A tone data processing device as recited in claim 1 wherein the waveform sample data of individual one of the channels transferred from said storage device to said input buffer can be of different sampling rates,

wherein said first process performed by said processor is capable of converting the waveform sample data to different inner sampling rates depending on respective channels of the waveform sample data, and

wherein when it is possible to perform predetermined arithmetic processing of same contents on the waveform sample data of different channels having been converted to a same inner sampling rate, said second process adds together corresponding ones of the waveform sample data of the different channels and performs the predetermined arithmetic processing on the added waveform sample data.

7. A tone data processing device as recited in claim 1 wherein said storage device is managed via a computer and provided separately from said tone data processing device, and said tone data processing device is connected to a bus of said computer.

8. A tone data processing device as recited in claim 1 wherein the predetermined arithmetic processing is performed by said processor in accordance with the inner sampling rate selected for conversion of the sampling rate of the waveform sample data.

9. A tone data processing device as recited in claim 8 wherein the predetermined arithmetic processing performed by said processor includes a filter process, and resolution of a set of coefficients to be used in said filter process

is changed in accordance with the selected inner sampling rate.

10. A tone data processing device as recited in claim 1 wherein the predetermined arithmetic processing performed by said processor includes at least one of a filter process, amplification process, mixing process and effect imparting process.

11. A tone data processing device as recited in claim 1 wherein when converting the sampling rate of the waveform sample data to the inner sampling rate, said first process performed by said processor also performs an operation for setting a pitch of a tone based on the waveform sample data in accordance with tone pitch control information.

12. A computer system comprising:

a central processing unit;

a storage device storing waveform sample data sampled at a given sampling rate and connected via a bus to said central processing unit; and

a tone data processing device connected via a bus to said central processing unit and said storage device, said tone data processing device collectively receiving, from said storage device, a given number of the waveform sample data asynchronously with the given sampling rate under control of said central processing unit and generating tone data on the basis of the waveform sample

data collectively received from said storage device, said tone data processing device comprising:

an input buffer for storing the waveform sample data collectively received from said storage device;

an output buffer; and

a processor connected with said input buffer and said output buffer and adapted to perform:

a first process for reading out the waveform sample data stored in said input buffer and converting the sampling rate of the read-out waveform sample data to an inner sampling rate selected from among a plurality of predetermined inner sampling rates;

a second process for performing predetermined arithmetic processing on the waveform sample data converted to the selected inner sampling rate;

a third process for converting the waveform sample data having undergone the predetermined arithmetic processing to a predetermined output sampling rate; and

a fourth process for writing, into said output buffer, the waveform sample data converted to the predetermined output sampling rate.

13. A computer system as recited in claim 12 wherein said processor is adapted to further perform a process for sequentially reading out the waveform sample data from said output buffer at an output sampling frequency corresponding to said predetermined output sampling rate to thereby generate tone data by means of said tone data processing

device in accordance with the output sampling frequency.

14. A machine-readable medium containing a group of instructions of a program for execution by a processor for receiving, from a storage device storing waveform sample data sampled at a given sampling rate, the waveform sample data asynchronously with the given sampling rate and generating tone data on the basis of the waveform sample data received from said storage device, an input buffer for storing the waveform sample data received from said storage device and an output buffer being connected to said processor; said program comprising:

a first step of reading out the waveform sample data stored in said input buffer and converting the sampling rate of the read-out waveform sample data to an inner sampling rate selected from among a plurality of predetermined inner sampling rates;

a second step of performing predetermined arithmetic processing on the waveform sample data converted to the selected inner sampling rate;

a third step of converting the waveform sample data having undergone the predetermined arithmetic processing to a predetermined output sampling rate; and

a step of writing, into said output buffer, the waveform sample data converted to the predetermined output sampling rate.

15. A machine-readable medium as recited in claim 14

wherein said program further comprises a step of sequentially reading out the waveform sample data from said output buffer at an output sampling frequency corresponding to said predetermined output sampling rate to thereby generate tone data in accordance with the output sampling frequency.

16. A tone data processing device for receiving waveform sample data sampled at a given sampling rate and generating tone data on the basis of the received waveform sample data, said tone data processing device comprising:

a first sampling rate conversion section for converting the sampling rate of the received waveform sample data to an inner sampling rate selected from among a plurality of predetermined inner sampling rates;

an arithmetic processing section for performing predetermined arithmetic processing on the waveform sample data converted to the selected inner sampling rate; and

a second sampling rate conversion section for converting the waveform sample data having undergone the predetermined arithmetic processing to a predetermined output sampling rate,

wherein tone data is generated in accordance with the predetermined output sampling rate.

17. A tone data processing device as recited in claim 16 wherein said first sampling rate conversion section compares the sampling rate of the waveform sample data

stored in the input buffer and the plurality of predetermined inner sampling rates to thereby select one of the predetermined inner sampling rates which is higher than and closest to the sampling rate of the waveform sample data, and converts the sampling rate of the waveform sample data to the selected inner sampling rate.

18. A tone data processing method of receiving waveform sample data sampled at a given sampling rate and generating tone data on the basis of the received waveform sample data, said tone data processing method comprising:

a step of converting the sampling rate of the received waveform sample data to an inner sampling rate selected from among a plurality of predetermined inner sampling rates;

a step of performing predetermined arithmetic processing on the waveform sample data converted to the selected inner sampling rate; and

a step of converting the waveform sample data having undergone the predetermined arithmetic processing to a predetermined output sampling rate,

wherein tone data is generated in accordance with the predetermined output sampling rate.